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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL C. BURKE and RONALD K. RYAN

Appeal 2008-005851
Application 09/267,176
Technology Center 3600

Decided: January 14, 2010

Before HUBERT C. LORIN, ANTON W. FETTING, and
BIBHU R. MOHANTY, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Michael C. Burke and Ronald K. Ryan (Appellants) seek review under 35 U.S.C. § 134 of a final rejection of claims 1, 3-9, 11-14, 18-21, and 43-61, the only claims pending in the application on appeal.

We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

We AFFIRM.

The Appellants invented a way of automatically managing energy costs using a utility processing system by automatically optimizing energy consumption, purchasing, and generation decisions based on energy usage and pricing data (Specification 1:9-12).

An understanding of the invention can be derived from a reading of exemplary claims 44 and 1, which are reproduced below [bracketed matter and some paragraphing added].

44. A system for managing energy cost, comprising:
[1] a server communicating with at least one utility meter,
wherein said server is configured to
[2] record metering data received from said utility meter via a network,
[3] forecast a forecast load based on the received metering data from the utility meter,
[4] create a current load shape from said metering data, and
[5] compare the current load shape to a load shape from a prior time period based on historical data;
wherein the server is further configured to
[6] receive pricing data from a plurality of sources of power from the network,
[7] determine an optimal consumption decision, and

[8] determine a price baseline for a combination of at least two of the plurality of sources of power from
price point data of the plurality of sources of power received over the network,
the forecast load and
a percentage of the forecast load which will be met by each of the plurality of sources of power; and
wherein the server is further configured to
[9] deliver the optimal consumption decision to a customer over the network.

1. A method for automatically managing energy cost using metering data and pricing data, the method comprising the steps of:
[1] receiving a customer's metering data from a utility meter,
wherein the metering data is electronically transmitted from the utility meter;
[2] receiving pricing data from a plurality of sources of power,
wherein the pricing data is received electronically over a network;
[3] forecasting a forecast load based on the received metering data from the utility meter,
wherein said forecasting includes the steps of
creating a current load shape from said metering data, and
comparing the current load shape to a load shape from a prior time period based on historical data;
[4] determining a price baseline for a combination of the plurality of the sources of power,
wherein the price baseline is determined by
price point data for the plurality of sources of power,
the forecast load and
a percentage of the forecast load which will be met by each of the plurality of sources of power;
[5] determining an optimal consumption decision
based on the received pricing data and the forecast load,

wherein the consumption decision selects at least two of the plurality of sources of power to thereby reduce utility costs, and

wherein said optimal consumption decision

is calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and the forecast load and

derives a percentage of the forecast load that will be met by each of the plurality of sources of power; and

[6] delivering the optimal consumption decision to the customer via the network.

This appeal arises from the Examiner's Final Rejection, mailed April 16, 2007. The Appellants filed an Appeal Brief in support of the appeal on September 17, 2007. An Examiner's Answer to the Appeal Brief was mailed on December 6, 2007.

PRIOR ART

The Examiner relies upon the following prior art:

Takriti	US 6,021,402	Feb. 1, 2000
Johnson	US 6,047,274	Apr. 4, 2000

Andrew Bruce et al., *Forecasting load-duration curves*, 13 Journal of Forecasting, 545 (Nov. 1994) (http://proquest.umi.com/pqdweb?did=23260&sid=16&Fmt=3&clientid=19649&RQT=309&VName=PQD)(last visited Aug. 15, 2005) (hereinafter "Bruce").

REJECTIONS

Claims 1, 3-9, 11-14, and 18-21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce.

Claims 43-61 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce.

ISSUES

The issue of whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce turns on whether a system that would allow either one or multiple providers reads on the claims in the instance of multiple providers, what degree of automation is required by the claims, and whether the billing statement in Johnson provides the price baseline required by the claims.

The issue of whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 43-61 under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce turns on the above issues.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Johnson

01. Johnson is directed to an auction service that stimulates competition and facilitates the consumer's ability to make economic choices between providers. Providers supply energy to end users resulting from a bidding process between participating providers, administered by a bidding service entity through operation of a central processor referred to as a bidding moderator (the "Moderator"). Johnson 6:67-6:10.

02. Each of the Providers transmits to the Moderator the rate it is willing to charge over some particular period of time. The Provider may change its bids as often as it likes. The Moderator

collects this bid information from all the Providers, sorts it according to the rules of the auction and transmits selected portions of this information to an end user control computer. Johnson 6:20-56.

03. The Moderator collects end users' actual usage data from end users' meters and processes this data to create periodic usage reports transmitted to Providers. Each Provider of electric power manages its power generation and provisioning activities in response to periodic reports of end users' actual usage transmitted and can adjust its power generating or provisioning capacity to reflect higher or lower expected usage as these periodic reports are received. Providers manage their power generation activities by adjusting their bids from time to time, depending on capacity utilization or other energy availability factors. Johnson 6:57-7:51.

04. Johnson's meter data collection is automatic. Johnson 9:4-13.

05. Johnson's Moderator transmits to each control computer such rate information and provider selection data as is relevant to the end user associated with that control computer. Johnson 9:30-33.

06. Each control computer selects the Provider offering the lowest rate (or best economic value) at that time to the end users associated with that control computer after applying any decision rules formulated and inputted by the control computer's administrator and transmits such selection to the Moderator. Johnson 9:34-40.

07. The Moderator performs all of the functions the control computer would otherwise perform for those end users not associated with a control computer. Johnson 9:41-46.

08. Johnson's Moderator transmits to each end user a consolidated billing statement, based on the actual energy usage data received by the Moderator from that end user's meter during an entire billing cycle and the winning bid data relating to all selected Providers who supplied electric power or natural gas to this end user during that billing cycle. Johnson 10:23-34.

Takriti

09. Takriti is directed to scheduling generating units of a utility while taking into consideration power trading with other utilities and the stochastic load on the system. The system allows the user to provide multiple load forecasts and to vary the fuel price between the different scenarios and the different periods of the planning horizon. Takriti 4:58-64.

Bruce

10. Bruce is directed to forecasting electricity load-duration curves. The approach first forecasts the load curve and then uses the resulting predictive densities to forecast the load-duration curve. Bruce 1:Abstract.

Facts Related To The Level Of Skill In The Art

11. Neither the Examiner nor the Appellants has addressed the level of ordinary skill in the pertinent arts of systems analysis and programming, energy conservation and energy management systems design. We will therefore consider the cited prior art as

representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown'") (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

Facts Related To Secondary Considerations

12. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily).

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing such definitions in the specification with sufficient

clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change).

Obviousness

A claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2000); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

In *Graham*, the Court held that the obviousness analysis is bottomed on several basic factual inquiries: "[(1)] the scope and content of the prior art are to be determined; [(2)] differences between the prior art and the claims at issue are to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383 U.S. at 17. *See also KSR*, 550 U.S. at 406. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416.

ANALYSIS

Claims 1, 3-9, 11-14, and 18-21 rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce.

Claims 43-61 rejected under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce.

The Appellants argue these claims together, relying on the arguments in support of claim 1 for the remaining claims as well. Accordingly, we treat all claims as a group and select claim 1 as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Examiner found that Johnson described the limitations of claim 1 except for the claimed optimal consumption decision being calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and forecasting load and the claimed forecasting a forecast load based on the received metering data from the utility meter, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data. The Examiner applied Johnson and Bruce for these limitations (Ans. 3-8).

The Appellants contend that (1) the auction system taught by Johnson is not the automatic determination and delivery of an optimal energy consumption decision to a customer as taught by the instant application (Br. 7-8); (2) the auction system taught by Johnson does not require use of two or more sources of power/utility providers/energy providers for determining and delivering the optimal consumption decision, as taught by the instant application (Br. 9-10); (3) the auction system taught by Johnson does not determine a price baseline from two or more sources of power as required by the current invention (Br. 11); (4) the auction system taught by Johnson does not teach use of a (derivation of a) percentage of forecasted customer energy needs that will be met by each of the at least two sources of power as

required by the current invention (Br. 12-13); and (5) the auction system taught by Johnson does not determine an optimal consumption decision from the selection of at least two sources of power as required by the current invention (Br. 13-14).

We disagree with the Appellants. As to argument (1), the Examiner responded that Johnson's control computer selects the best Energy Providers; an Energy Auction System ("EAS") receives information such as price rates from the Moderator and each control computer automatically selects the Provider offering the lowest rate (or best economic value). (Ans. 23). These facts are in accord with Johnson (FF 05 & 06).

The Appellants contend that bidders are inserted into the process (Br. 8). We take this to mean that the Appellants contend that the actions of human bidders preclude automation of the determination. This argument is not commensurate with the scope of the claim. The only recitation of automation in the claim is in the preamble.

"[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995). Where a patentee uses the claim preamble to recite structural limitations of his claimed invention, the PTO and courts give effect to that usage. *See id.*; *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.,* 868 F.2d 1251, 1257 (Fed. Cir. 1989). Conversely, where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation. *See Bell Communications,* 55 F.3d at 620; *Kropa v. Robie,* 187 F.2d 150, 152 (CCPA 1951).

Claim 1 is a method claim and the steps define a complete invention in the claim body. Thus, the preamble is not a claim limitation. Even were such automation a claim limitation, the Appellants have not shown that the execution of each of the steps in claim 1 as practiced in the applied prior art as is not automatic, because the data reception, forecasting, and data determination steps are clearly performed by the computers. Whether these steps rely on data from bid submissions is simply outside the scope of each of these steps. Thus, the Appellants' argument is based on a step not within the scope of claim 1.

As to arguments (2)-(5), each is based on the recitation of plural sources of power in claim 1. The Examiner responded that Johnson describes such plural sources (Ans. 24-25). This is in fact the case (FF 08). The Appellants' argument that Johnson does not require multiple sources is not commensurate with the scope of the claim. Limitations [2], [4], and [5] are the limitations reciting multiple sources. Although the art must describe multiple sources, or at least show such were predictable, to read on claim 1, nothing in claim 1 affirmatively tests for a single source and affirmatively causes cessation of the process if only a singular source is found. Thus, although Johnson's singular source implementation would not read on claim 1, Johnson's plural source implementations would. The Appellants also argue that Johnson teaches away from the use of multiple sources (Br. 10). This contention is unpersuasive for the reason that Johnson explicitly provides for multiple sources. "'A reference may be said to teach away when a person of ordinary skill, upon reading the reference, . . . would be led in a direction divergent from the path that was taken by the applicant.'" *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001), (quoting *Tec Air, Inc. v.*

Denso Mfg. Mich. Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999)). Simply that there are differences between two references is insufficient to establish that such references teach away from any combination thereof. *See In re Beattie*, 974 F.2d 1309, 1312-13 (Fed. Cir. 1992).

As to argument [2], the Appellants further argue that Johnson is at odds with the implementation disclosed in the Specification, citing four examples (Br. 10). Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003).

As to argument [3], the Appellants also argue that Johnson's consolidated billing is not a price baseline (Br. 11). The Appellants contend that billing statements only look back and the price baseline is used for forecasting. Again, the Appellants' argument is not commensurate with the scope of the claim. Claim 1 uses the received pricing date from limitation [2], not the price baseline from limitation [4], for determining the optimal decision in limitation [5]. The only recitation of forecasting in claim 1 is in limitation [3], using meter data rather than pricing data.

As to argument [4], the Appellants contend that Johnson does not describe the use of such a percentage of forecasted needs. The Examiner found that the provision of multiple providers on a consolidated billing statement implied a percentage that each provider supplied (Ans. 4). We take the Appellants' argument to mean that Johnson does not explicitly describe using a percentage number of a forecast load. The recitation of the percentage of forecast load occurs in limitation [4] alone. This percentage is used in determining the price baseline. Limitation [4] does not specify when the determination occurs or how the determination is derived. We find that

because a consolidated billing statement as in Johnson (FF 08) necessarily describes the portion that each supplier applied to the total billing, such a portion is simply some percentage of the total. Thus, the use of each supplier's portion is implicitly the use of the percentage of that portion toward the total. Again, limitation [4] does not specify how the determination is derived, so an indirect implicit use of such a percentage would meet the broad limitation of "is determined by." Although the billing statement is based on actual consumption, this consumption is in turn based on the forecast consumption that is used in Johnson's bidding process. Again, limitation [4] does not specify when the determination is derived, so whether Johnson determines its consolidated billing after the forecast period when actual data is available does not negate Johnson's description of limitation [4].

As to argument [5], the Appellants contend that Johnson does not determine an optimal consumption decision. The Examiner found that Johnson did so by selecting the lowest bids (Ans. 5). We find that Johnson did in fact select the lowest bids (FF 06). The determination of an optimal consumption decision is in limitation [5]. The Examiner relied on Takriti and Bruce to describe the particular derivation recited in limitation [5] and the Appellants have not contended that those references fail to describe such a derivative technique. The Examiner relied on Johnson to describe using at least two providers in such a determination of some consumption optimization technique. We find that selecting a low bid for a particular amount of commodity is a consumption optimization technique,

optimized for finding the lowest bids. As we found *supra*, Johnson describes doing so with multiple providers. Thus, we find argument [5] unpersuasive.

CONCLUSIONS OF LAW

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce.

The Appellants have not sustained their burden of showing that the Examiner erred in rejecting claims 43-61 under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce.

DECISION

To summarize, our decision is as follows:

- The rejection of claims 1, 3-9, 11-14, and 18-21 under 35 U.S.C. § 103(a) as unpatentable over Johnson, Takriti, and Bruce is sustained.
- The rejection of claims 43-61 under 35 U.S.C. § 103(a) as unpatentable over Johnson and Bruce is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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